

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Alexey Zdanovsky et al.

Title: RAPIDLY DEGRADED REPORTER FUSION PROTEINS

Docket No.: 341.021US1

Filed: September 16, 2003

Examiner: Unknown

Customer No.: 21186

Serial No.: 10/664,341

Due Date: N/A

Group Art Unit: Unknown

Confirmation No.: Unknown

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

We are transmitting herewith the following attached items (as indicated with an "X"):

- ☒ A return postcard.
- ☒ An Information Disclosure Statement (2 pgs.), Form 1449 (4 pgs.), and copies of 56 cited documents.

If not provided for in a separate paper filed herewith, Please consider this a **PETITION FOR EXTENSION OF TIME** for sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

Customer Number 21186

By: 
Atty: Janet E. Emberson
Reg. No. 39,665

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 29th day of October, 2003.

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Gulim Abileva
Signature

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
(GENERAL)

Customer Number 21186

S/N 10/664,341



PATENT

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INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicants respectfully request that this Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicants with the next official communication.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Information Disclosure Statement. However, if an Office Action on the merits has been mailed, the Commissioner is hereby authorized to charge the required fees to Deposit Account No. 19-0743 in order to have this Information Disclosure Statement considered.



INFORMATION DISCLOSURE STATEMENT

Serial No.: 10/664341

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The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

The present application is either a U.S. national patent application filed after June 30, 2003 or an international application that entered the national stage under 35 U.S.C. § 371 after June 30, 2003. Thus, Applicant believes that the U.S. Patent & Trademark Office has waived the requirement under 37 C.F.R. 1.98 (a)(2)(i) for submitting a copy of each cited U.S. patent and each U.S. patent application publication. The waiver is provided in a pre-OG notice from the U.S. Patent & Trademark Office entitled "Information Disclosure Statements May Be Filed Without Copies of U.S. Patents and Published Applications in Patent Applications filed after June 30, 2003" and dated July 11, 2003. Applicant acknowledges the requirement to submit copies of foreign patent documents and non-patent literature in accordance with 37 C.F.R. 1.98(a)(2).

Respectfully submitted,

ALEXEY ZDANOVSKY ET AL.

By their Representatives,

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Date

October 24, 2003

By

Janet E. Embretson

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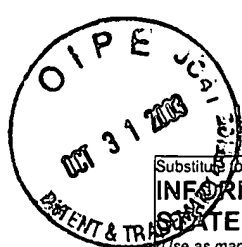
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Name

Gulim Abilova

Signature

Gulim Abilova



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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/664,341
Filing Date	September 16, 2003
First Named Inventor	Zdanovsky, Alexey
Group Art Unit	Unknown
Examiner Name	Unknown

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US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate
	US-2002/0058274A1	05/16/2002	Li, Xianqiang, et al.	435	6	08/15/2001
	US-5,646,017	07/08/1997	Bachmair, Andreas, et al.	435	69.7	06/07/1995
	US-6,130,313	10/10/2000	Li, Xianqiang, et al.	530	324	04/17/1998
	US-6,306,600	10/23/2001	Kain, Steve, et al.	435	6	07/30/1999

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T ²
	AU-751163	11/08/1999	Li, Xianqiang, et al.	C07K	014/00	
	JP-512015	04/23/2003				
	WO-01/57242A2	08/09/2001	Stack, Jeffrey H., et al.	C12 Q	1/00	
	WO-01/57242A3	08/09/2001	Stack, Jeffrey H., et al.	C12 Q	1/37	
	WO-89/09829	10/19/1989	Bachmair, Andreas, et al.	C12 N	15/00	
	WO-99/54348	10/28/1999	Li, Xianqiang, et al.	C07K	14/00	

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		ANDREATTA, C., et al., "Use of Short-Lived Green Fluorescent Protein for the Detection of Proteasome Inhibition", <u>BioTechniques</u> , 30 (3), (2001), 656-660	
		BACHMAIR, ANDREAS, "In vivo half-life of a protein is a function of its amino terminal residue", <u>Science</u> , 234, (1986), 179-186	
		BENCE, NEIL F., et al., "Impairment of the Ubiquitin-Proteasome System by Protein Aggregation", <u>Science</u> , 292, (May 2001), 1552-1555	
		BERCOVICH, ZIPPI, et al., "Degradation of Ornithine Decarboxylase in Reticulocyte Lysate Is ATP-dependent but Ubiquitin-independent", <u>The Journal of Biological Chemistry</u> , 264 (27), (1989), 15949-15952	
		BOHLEY, PETER, "Surface Hydrophobicity and Intracellular Degradation of Proteins", <u>Biological Chemistry</u> , 377 (7-8), (1996), 425-435	
		BOSHART, MICHAEL, et al., "A Very Strong Enhancer Is Located Upstream of an Immediate Early Gene of Human Cytomegalovirus", <u>Cell</u> , 41, (June 1985), 521-530	
		CORALLI, CLAUDIA, et al., "Limitations of the Reporter Green Fluorescent Protein under Simulated Tumor Conditions", <u>Cancer Research</u> , 61, (June 2001), 4784-4790	
		CORISH, PETE, et al., "Attenuation of green fluorescent protein half-life in	

EXAMINER**DATE CONSIDERED**

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional) ² Applicant is to place a check mark here if English language Translation is attached



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OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

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		mammalian", <u>Protein Engineering</u> , 12 (12), (1999), 1035-1040	
		FAN, XINHAO CYNTHIA, et al., "AU-rich elements target small nuclear RNAs as well as mRNAs for rapid degradation", <u>Genes and Development</u> , 11, (1997), 2557-2568	
		GHODA, L., et al., "Prevention of Rapid Intracellular Degradation of ODC by a Carboxyl-Terminal Truncation", <u>Science</u> , 243, (March 1989), 1493-1495	
		GHODA, LUCY, et al., "Structural Elements of Ornithine Decarboxylase Required for Intracellular Degradation and Polyamine-Dependent Regulation", <u>Molecular and Cellular Biology</u> , 12 (5), (May 1992), 2178-2185	
		GHODA, LUCY, et al., "Trypanosome Ornithine Decarboxylase Is Stable Because It Lacks Sequences Found in the Carboxyl Terminus of the Mouse Enzyme Which Target For Intracellular Degradation", <u>The Journal of Biological Chemistry</u> , 265 (20), (1990), 11823-11826	
		GILON, TAMAR, et al., "Degradation signals for ubiquitin system proteolysis in <i>Saccharomyces cerevisiae</i> ", <u>The EMBO Journal</u> , 17 (10), (1998), 2759-2766	
		GLOTZER, MICHAEL, et al., "Cyclin is degraded by the ubiquitin pathway", <u>Nature</u> , 349, (Jan. 1991), 132-138	
		GORMAN, CORNELIA M., et al., "The Rous sarcoma virus long terminal repeat is a strong promoter when introduced into a variety of eukaryotic cells by DNA-mediated transfection", <u>Proceedings of the National Academy of Sciences USA</u> , 79, (Nov. 1982), 6777-6781	
		GOSSEN, MANFRED, et al., "Tight control of gene expression in mammalian cells by tetracycline-responsive promoters", <u>Proceedings of the National Academy of Sciences USA</u> , 89, (June 1992), 5547-5551	
		HELLWEG, CHRISTINE E., et al., "Enhanced green fluorescent protein as reporter protein for biomonitoring of cytotoxic effects in mammalian cells", <u>Analytica Chimica Acta</u> , 427, (2001), 191-199	
		HELLWEG, CHRISTINE E., et al., "Suitability of enhanced green fluorescent protein as a reporter component for bioassays", <u>Analytica Chimica Acta</u> , 426, (2001), 175-184	
		HERSHKO, AVRAM, et al., "The ubiquitin system for protein degradation", <u>Annu. Rev. Biochem.</u> , 61, (1992), 761-807	
		HICKE, LINDA, "Ubiquitin-dependent internalization and down-regulation of plasma membrane proteins", <u>The FASEB Journal</u> , 11, (Dec. 1997), 1215-1225	
		HUNT, TIM, et al., "The Requirements for Protein Synthesis and Degradation, and the Control of Destruction of Cyclins A and B in the Meiotic and Mitotic Cell Cycles of the Clam Embryo", <u>Journal of Cell Biology</u> , 116 (3), (Feb. 1992), 707-724	
		JOAZEIRO, CLAUDIO A., et al., "The Tyrosine Kinase Negative Regulator c-Cbl as a RING-Type, E2-Dependent Ubiquitin-Protein Ligase", <u>Science</u> , 286, (Oct. 1999), 309-312	

EXAMINER

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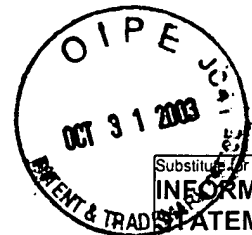
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		JOHNSON, ERICA S., et al., "A Proteolytic Pathway That Recognizes Ubiquitin as a Degradation Signal", <u>The Journal of Biological Chemistry</u> , 270 (29), (July 1995), 17442-17456	
		KIM, DONG WAN, et al., "Use of the human elongation factor 1a promoter as a versatile and efficient expression system", <u>Gene</u> , 91, (1990), 217-223	
		KING, RANDALL W., et al., "Mutagenic Analysis of the Destruction Signal of Mitotic Cyclins and Structural Characterization of Ubiquitinated Intermediates", <u>Molecular Biology of the Cell</u> , 7, (Sept. 1996), 1343-1357	
		KUHLMAN, SANDRA J., et al., "GFP fluorescence reports Period 1 circadian gene regulation in the mammalian biological clock", <u>NeuroReport</u> , 11 (7), (May 2000), 1479-1482	
		KWON, YONG TAE, et al., "The mouse and human genes encoding the recognition component of the N-end rule pathway", <u>Proceedings of the National Academy of Sciences USA</u> , 95, (July 1998), 7898-7903	
		LECLERC, GILLES M., et al., "Development of a Destabilized Firefly Luciferase Enzyme for Measurement of Gene Expression", <u>BioTechniques</u> , 29, (Sept. 2000), 590-601	
		LI, XIANQIANG, et al., "Generation of Destabilized Green Fluorescent Protein as a Transcription Reporter", <u>The Journal of Biological Chemistry</u> , 273 (52), (1998), 34970-34975	
		LORENS, J. B., et al., "Rapid Communication. Optimization of Regulated LTR-Mediated Expression", <u>Virology</u> , 272, (2000), 7-15	
		MATEUS, CAROLINA, et al., "Destabilized green fluorescent protein for monitoring dynamic changes in yeast gene expression with flow cytometry", <u>Yeast</u> , 16, (2000), 1313-1323	
		MCNAUGHT, KEVIN S., et al., "Failure of ubiquitin-proteasome system in Parkinson's disease", <u>Nature Reviews</u> , 2, (Aug. 2001), 589-594	
		MIZUSHIMA, SEIICHI, et al., "pEF-BOS, a powerful mammalian expression vector", <u>Nucleic Acids Research</u> , 18 (17), (1990), page 5322	
		MURAKAMI, YASUKO, et al., "Ornithine decarboxylase is degraded by the 26S proteasome without ubiquitination", <u>Nature</u> , 360, (Dec. 1992), 597-599	
		MURRAY, ANDREW W., et al., "The role of cyclin synthesis and degradation in the control of maturation promoting factor activity", <u>Nature</u> , 339, (May 1989), 280-286	
		RECHSTEINER, MARTIN, "PEST sequences are signals for rapid intracellular proteolysis", <u>Seminars in Cell Biology</u> , 1, (1990), 433-440	
		REISS, YUVAL, et al., "Specificity of Binding of NH2-terminal Residue of Proteins to Ubiquitin-Protein Ligase", <u>The Journal of Biological Chemistry</u> , 263 (6), (1988), 2683-2698	
		ROGERS, SCOTT, et al., "Amino Acid Sequences Common to Rapidly Degraded Proteins: The PEST Hypothesis", <u>Science</u> , 234, (Oct. 1986), 364-368	

EXAMINER

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		SALGHETTI, SIMONE E., et al., "Regulation of Transcriptional Activation Domain Function by Ubiquitin", <u>Science</u> , 293, (Aug. 2001), 1651-1653	
		STACK, JEFFREY H., et al., "A ubiquitin-based tagging system for controlled modulation of protein stability", <u>Nature Biotechnology</u> , 18, (Dec. 2000), 1298-1302	
		SUNG, DEUKYONG, et al., "The N-Terminal Amino Acid Sequences of the Firefly Luciferase Are Important for the Stability of the Enzyme", <u>Photochemistry and Photobiology</u> , 68 (5), (1998), 749-753	
		TOBIAS, JOHN W., et al., "The N-End Rule in Bacteria", <u>Science</u> , 254, (Nov. 1991), 1374-1377	
		TOWNSEND, ALLAIN, et al., "Defective Presentation to Class I-Restricted Cytotoxic T Lymphocytes in Vaccinia-Infected Cells is Overcome by Enhanced Degradation of Antigen", <u>J. Exp. Med.</u> , 168, (Oct. 1988), 1211-1224	
		VARSHAVSKY, ALEXANDER, "The N-End Rule", <u>Cell</u> , 69, (May 1992), 725-735	
		WADA, K, "Codon Usage Tabulated from GenBank Genetic Sequence Data", <u>Nucleic Acids Research</u> , 18, (1990), 2367-2411	
		WAHLERS, A., et al., "Influence of multiplicity of infection and protein stability on retroviral vector-mediated gene expression in hematopoietic cells", <u>Gene Therapy</u> , 8, (2001), 477-485	
		WOOD, KEITH, et al., "Luminescence Technologies for Cell-based Screening", <u>SBS Workshop</u> , PowerPoint Presentation. The Hague, Netherlands, (2002), 97 pages	
		ZDANOVSKAIA, MARINA V., et al., "Recombinant Derivatives of Clostridial Neurotoxins as Delivery Vehicles for Proteins and Small Organic Molecules", <u>Journal of Protein Chemistry</u> , 19 (8), (2000), 699-707	
		ZDANOVSKY, ALEX, "Development of destabilized reporters and thier application for the analysis of promoter activity", <u>Abstract for Meeting</u> , 1st International Cytomics Conference, International Society for Analytical Cytometry (ISAC). Newport, Wales, (January 6, 2003), 2 pages	
		ZHOU, XIAOFENG, et al., "Posttranscriptional Destabilizaion of the Bradykinin B1 Receptor Messenger RNA: Cloning and Functional Characterization of the 3'-Untranslated Region", <u>Molecular Cell Biology Research Communications</u> , 1, (1999), 29-35	

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